Oil Field Environmental Incident Summary

Incident: 20140618023853 **Date/Time of Notice:** 06/18/2014 02:38
Responsible Party: ENDURO OPERATING, LLC
Well Operator: ENDURO OPERATING, LLC
Well Name: CARL O. GILSETH ET UX 2-R
Field Name: MOHALL **Well File #:** 6206
Date Incident: **6/17/2014** **Time Incident:** 10:30 **Facility ID Number:**
County: BOTTINEAU **Twp:** 161 **Rng:** 83 **Sec:** 5 **Qtr:**
Location Description:

Submitted By: Scott Hunskor **Received By:**

Contact Person: Scott Hunskor
777 MAIN STREET
SUITE 800
FORT WORTH, TX 76102

General Land Use: Pasture **Affected Medium:** Soil and Water

Distance Nearest Occupied Building: 1 Mile
Distance Nearest Water Well:
Type of Incident: Pipeline Leak
Release Contained in Dike: No **Reported to NRC:** No

	Spilled	Units	Recovered	Units	Followup	Units
Oil						
Brine	**250**	**Barrels**	**200**	**Barrels**	**200**	**barrels**
Other						

Description of Other Released Contaminant:

Inspected: **Written Report Received:** 10/6/2015 **Clean Up Concluded:** 6/27/2014

Risk Evaluation:
ground surface and water next to spill area

Areal Extent:
50' x 50' south side of dike

Potential Environmental Impacts:

top soil, surface water

Action Taken or Planned:

Shut wells in, called NDIC, NDDOH, diked water leaking off sight. Determined how far brine water was in surface water and isolated with clay dikes. Water truck on location to suck up released water inside of dike and surface water isolated with clay dikes. Future. will be to strip top foot of affected area and haul away and replace with clean topsoil.

Wastes Disposal Location: Water is being hauled to SWD, and topsoil will be hauled to PDI

Agencies Involved: ND Dept. of Health

Updates

Date: 6/17/2014 ***Status:*** Reviewed - Follow-up Required ***Author:*** Roberts, Kris

Updated Oil Volume:

Updated Salt Water Volume:

Updated Other Volume:

Updated Other Contaminant

Notes:

6/17/14 - 15:30 Received call from company contact describing the pipeline release and actions taken to minimize off-location impacts to land and surface water. Contact was unaware that concentrated production water brine will form a density gradient in fresh water and therefore had not sampled appropriately. Recommended that they contact an environmental consultant to properly sample the impacted stream. An NDDoH inspector will be there 6/18.

Date: 6/18/2014 ***Status:*** Inspection ***Author:*** Roberts, Kris

Updated Oil Volume:

Updated Salt Water Volume:

Updated Other Volume:

Updated Other Contaminant

Notes:

6/18/14 - 09:15 on location. Met with company contact. Due to improper construction when the tank battery dike was built, this release from an underground pipeline inside the dike seeped under the the dike. This pipeline delivered produced water brine under pressure to another tank battery where it was then used for secondary recovery injection. Brine that seeped out of the containment flowed across approximately 100 feet of low and riparian land into West Cutbank Creek. At the location, the creek forked and major flow was through the north fork which was impacted. Berms were placed between the impact area and the south fork, and a plug dike was put in across the north fork beyond where release was believed to have progressed.
At time of inspection, contractor was removing impacted soil from inside the release containment berm, and a vacuum truck arrived and continued removing impacted water from upstream of the plug dike on the north fork. Screening with specific conductivity meter and chloride titration strips showed background conditions upstream in the creek impact to be 1,155 uS/cm and 31-37 mg/L. Outside the protective berm, in the south fork of the creek, specific conductivity was 1,553 uS/cm and also 31-37 mg/L. Immediately outside of the plug dike on the north fork, specific condutivity was 144,700 uS/cm (chloride was not determined due to the high reading). At 50 feet downstream of the plug dike, specific conductivity was 1,510 uS/cm, but titration strip showed chloride concentration at greater than 6,903 mg/L (highest reading on the chart). On recommendation, the company will remove several loads of water from just downstream of the plug dike, allowing the south fork to backflow into the north fork, flushing the impacted waters back to the extraction point. After water extraction, vegetation and 6-12 inches of sediment will be removed from both sides of the plug dike.
Company representative described plans to modify the tank containment system with keyed-in liner material and to construct a permanent diking system between the tank battery and the creek riparian zone, with dike height to be above the creek's high water mark. Any water accumulation inside the second dike will be considered water for disposal well or enhanced recovery injection.

Date: 7/17/2014 ***Status:*** Inspection ***Author:*** Washek, Sandi

Updated Oil Volume:

Updated Salt Water Volume:

Updated Other Volume:

Updated Other Contaminant

Notes:

Arrived on site at 9:40am, the weather was sunny with wind out of the SW at 10 mph. The secondary dike had been repaired on the southeast side of the tank battery area. The creek water is still very high. Talked to construction rep and was informed the company plans to do additional repairs to the dike once the water level drops. Additional followup needed for site.

Date: 9/26/2014 ***Status:*** Inspection ***Author:*** Roberts, Kris

Updated Oil Volume:

Updated Salt Water Volume:

Updated Other Volume:

Updated Other Contaminant

Notes:

9/26/14 - 17:45 on location. Dikes repaired. Water in Cut Bank Creek is at 1075 uS/cm, while water inside the original spill containment berm is 2.5 mS/cm, and residual water in the trapped north fork beyond the berm is 5.7 mS/cm. The volumes in both places, however, are insufficient to cause further significant effect on Cut Bank Creek if another heavy rain flushes these waters out into the main creek. Therefore, no further action is indicated at this time. The secondary dike around the facility perimeter should be sufficient to protect against anything below a major catastrophic release from the facility.